

Claims

- [c1] A component having a coating on a first surface thereof and a through-hole from which has been removed a deposit that was contiguous with the coating, the deposit being removed by directing a liquid-containing jet at the through-hole from a second surface of the component opposite the first surface, the jet containing non-abrasive particulate media and being emitted from a nozzle at a pressure insufficient to remove substantially all of the deposit from the through-hole if the particulate media were not present in the jet, wherein surfaces of the component and the coating defining the through-hole are deburred and smoothed so as to increase the discharge coefficient of the through-hole.
- [c2] A component according to claim 1, wherein the coating is a ceramic layer on the first surface of the component.
- [c3] A component according to claim 2, wherein the ceramic layer is a plasma sprayed ceramic layer.
- [c4] A component according to claim 1, wherein the component is an air-cooled component, and the through-hole is a cooling hole that intersects the first and second sur-

faces of the component.

- [c5] A component according to claim 1, wherein the surfaces of the component and the coating defining the through-hole are deburred and smoothed primarily by impact fracturing of the deposit and impact flattening of the surfaces, and not by erosion or abrasion of the deposit.
- [c6] A component according to claim 1, wherein the discharge coefficient of the through-hole is at least 0.9.
- [c7] A component according to claim 1, wherein the discharge coefficient of the through-hole is greater than 0.91.
- [c8] An air-cooled gas turbine engine component having a metallic bond coat on a first surface thereof, a ceramic layer on the bond coat, and cooling holes that intersect a first surface and an oppositely-disposed second surface of the component, wherein deposits have been removed from the cooling holes that were contiguous with the coating, the deposits being removed by directing a liquid-containing jet at the cooling holes from the second surface of the component, the jet containing spherical non-abrasive particulate media and being emitted from a nozzle at a pressure insufficient to remove substantially all of the deposit from the cooling holes if the particulate

media were not present in the jet, wherein surfaces of the component and the ceramic layer defining the cooling holes are deburred and smoothed so as to increase the discharge coefficient of the cooling holes to a value of at least 0.9.

- [c9] An air-cooled gas turbine engine component according to claim 8, wherein the deposits are removed from the cooling holes primarily by impact fracturing and not by erosion or abrasion.
- [c10] An air-cooled gas turbine engine component according to claim 8, wherein the surfaces of the component are smoothed by impact flattening of microfeatures on the surfaces.
- [c11] An air-cooled gas turbine engine component according to claim 8, wherein the air-cooled gas turbine engine component is a combustor liner.
- [c12] An air-cooled gas turbine engine component according to claim 8, wherein the discharge coefficients of the cooling holes are greater than 0.91.